

**Amendments to the Claims:** This listing of claims will replace all prior versions, and listings, of claims in the application

Listing of Claims:

1. (Currently Amended) A system for exposing a fluid to UV energy for treatment of the fluid, said system comprising:
  - a UV energy transmissive barrier;
  - a fluid passageway at least partially defined by an interior surface of said UV energy transmissive barrier;
  - an outer enclosure and a space defined between said outer enclosure and said UV energy transmissive barrier;
  - at least one array of UV energy sources positioned in said space defined between said outer enclosure and said UV energy transmissive barrier proximal an exterior surface of said UV energy transmissive barrier to transmit UV energy through said barrier and into said fluid passageway; and
  - at least one a plurality of UV energy sensors positioned proximal an exterior surface of said UV energy transmissive barrier provided among said UV energy sources in the UV energy source array to sense UV energy transmitted through said barrier by said sources, said sensors being configured to detect a reduced amount of UV energy transmitted through said barrier;
  - wherein said UV energy sources and said UV energy sensors are provided about an interior circumference of said outer enclosure.
2. (Original) The system of claim 1 wherein said fluid passageway is configured to accommodate fluid flow.
3. (Canceled)
4. (Canceled)
5. (Currently Amended) The system of claim 1 wherein ~~said~~ at least one of said UV energy sources comprises an LED.
6. (Currently Amended) The system of claim 1 wherein ~~said~~ at least one of said UV energy sources is positioned adjacent said barrier.

7. (Currently Amended) The system of claim 1, ~~comprising a plurality of UV energy sources and a plurality of UV energy sensors, each of said plurality of UV energy sensors being~~ positioned to sense UV energy transmitted through said barrier by at least one of said UV energy sources.

8. (Original) The system of claim 7 wherein said UV energy sources are positioned adjacent an external surface of said fluid passageway for sensing UV energy transmitted through said barrier.

9. (Original) The system of claim 7 wherein said UV energy sensors are positioned adjacent an external surface of said fluid passageway for sensing UV energy transmitted through said barrier.

Claims 10-20 (Canceled)

21. (Previously Presented) The system of claim 1 wherein said UV energy transmissive barrier comprises a hollow conduit.

22. (Previously Presented) The system of claim 21 wherein said hollow conduit comprises a pipe.

23. (Previously Presented) The system of claim 21 wherein said fluid passageway is substantially round in cross-sectional shape.

Claims 24-30 (Canceled)

31. (Currently Amended) The system of claim ~~24~~1, further comprising a source of cooling gas positioned to reduce heat generated in said space defined between said outer enclosure and said UV energy transmissive barrier.

32. (Currently Amended) A system for exposing a fluid to UV energy for treatment of the fluid, said system comprising:

a UV energy transmissive barrier at least partially defining a fluid passageway;

an outer enclosure proximal said UV energy transmissive barrier, said outer enclosure and said UV energy transmissive barrier at least partially defining a space therebetween;

an array of UV energy sources ~~at least one UV energy source~~ positioned in said space defined between said outer enclosure and said UV energy transmissive barrier; and

a plurality of UV energy sensors provided among said UV energy sources ~~at least one UV energy sensor~~ and positioned in said space defined between said outer enclosure and said UV energy transmissive barrier, said sensors being configured to detect a reduced amount of UV energy transmitted through said barrier.

33. (Canceled)